

REMARKS

By way of the above amendment, claims 1 and 37 are amended, claim 3 is canceled, and new claim 46 is added. Support for new claim 46 can be found at least in original claim 4. No new matter has been added. Claims 1, 2, 4-19 and 33-46 are, therefore, pending in this application.

The following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Office carefully review any references discussed below to ensure that Applicants' understanding and discussion of the references, if any, is consistent with the Office's understanding.

Rejection under 35 U.S.C. §102(e)

Claims 1, 2, 4, 5, 7, 37, 38, and 40 have been rejected under 35 U.S.C. § 102(e) as being anticipated by to Shibata (U.S. Patent No. 6,461,890).

Applicants traverse the rejection of claims 1, 2, 4, 5, 7, 37, 38, and 40 under 35 U.S.C. § 102(e) as being anticipated by Shibata for at least the reason that Shibata fails to disclose or suggest each and every element of the claimed invention. To begin with, the rejected claims recite the limitation of a bond pad. The Office, however, argues that such a limitation is taught by component 61 in Figures 5 and 6. Applicants respectfully disagree with the Office's interpretation of this feature. Shibata describe that component 61 is a second terminal. See

*column 9, lines 1-5*. Shibata earlier describes that second terminals 21 are obtained by plating the wiring patterns with nickel and gold. *See column 7, lines 50-62*. But the Office has failed to substantiate how such a disclosure teaches a bond pad.

As well, Shibata fails to disclose the limitation that the conductive particles comprise metal with an insulating layer, as currently recited in the rejected claims. Indeed, in discussing similar limitations in other claims, the Office admits that Shibata does not disclose “conductive particles compris[ing] metal with an insulating layer.” *See, e.g.*, Office Action at 10.

Thus, the Office has not substantiated that Shibata described each and every limitation in the rejected claims. Accordingly, Applicant respectfully requests withdrawal of this ground of rejection.

#### Rejection under 35 U.S.C. § 103

Claims 6 and 8-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shibata in view of Figures 1-3 of the present application. Applicant respectfully traverses this rejection because the Office has not argued—much less alleged—that Shibata suggests those limitations discussed immediately above that it does not anticipate. And the Office has not pointed to any description in Figures 1-3 that would rectify such a deficiency. Thus, the Office failed to establish a *prima facie* case of obviousness and this rejection should be withdrawn.

#### Rejection under 35 U.S.C. § 103

Claims 3, 11, 12, 14-16, 18, 19, 33, 34, 36, 41, 42, 44, and 45 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shibata in view of U.S. Patent No. 6,223,429 to Kaneda et al. (“Kaneda”).

Applicants traverse this rejection because no *prima facie* case of obviousness has been established by the Office. The Office Action alleges that it would have been obvious to one of ordinary skill...to use the conductive particles of Kaneda in the invention of Shibata because Kaneda teaches conductive particles comprising metal with an insulating layer. Applicants respectfully disagree with this allegation since one of ordinary skill in the art would have not been motivated to combine the references as alleged by the Office Action.

Kaneda teaches heat conductive bonding, causing the conductive particles to “become fluid on the chip surface along with the resin. *See column 6, lines 48-51.* The result of this heating operation would be destruction of the insulating layer. In contrast, Shibata discloses using ultrasonic vibration to put the conductive particles in electrical contact between the contacts 11, 21, without melting the conductive particles. *See, e.g., column 3, lines 19-43 and column 8, lines 19-47.* This ultrasonic vibration is used because Shibata also discloses the importance of selecting conductive materials for good electrical contact. *Id.* Thus, Shibata teaches away from using insulated particles because no electrical contact would be made because of the insulating layer. Accordingly, one of ordinary skill would not have looked to select the conductive particles of Kaneda with an insulating layer for use in the device of Shibata because the insulating layer would prevent or limit the electrical connection needed in the device of Shibata.

Thus, the Office failed to establish a *prima facie* case of obviousness, and the rejection of the rejected claims should be withdrawn.

Rejection under 35 U.S.C. § 103

Claims 13, 17, 35, 39, and 43 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shibata in view of Kaneda, further in view of Figures 1-3 of the present application.


Applicants respectfully traverse this rejection because the Offices has not argued—much less alleged—that the proper combination Shibata and Kaneda suggests each and every limitation in the claims, namely, a conductive particle with an insulating layer. And the Office has not pointed to any description in Figures 1-3 that would rectify such a deficiency. Thus, the Office failed to establish a *prima facie* case of obviousness and this rejection should be withdrawn.

CONCLUSION

For the above reasons, as well as those of record, Applicant respectfully requests the Office to withdraw the pending grounds of rejection and allow all the pending claims.

If there is any fee due in connection with the filing of this Amendment, including a fee for any extension of time not accounted for above, please charge the fee to our Deposit Account No. 50-0843.

Respectfully Submitted,

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